



**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/221,554 12/28/98 ARKLES

B 08743-3U2

EXAMINER

000570 IM52/0924
AKIN, GUMP, STRAUSS, HAUER & FELD, L.L.P.
ONE COMMERCE SQUARE
2005 MARKET STREET, SUITE 2200
PHILADELPHIA PA 19103

MOORE, M
ART UNIT PAPER NUMBER

1712
DATE MAILED:

09/24/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/221,554

Applicant(s)

Arkles et al.

Examiner

Margaret Moore

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Sep 13, 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449 Paper No(s). _____)
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

Art Unit: 1712

1. Claims 1 to 23 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

There is no support in the specification for the phrase “by the release of unsaturated hydrocarbons and protonated byproducts”. For instance page 8 states that “upon subsequent heating... at relatively moderate temperatures... alkyl groups appear to be volatilized...”. This in no way supports the specific limitation cited above. Furthermore, the excerpts cited by applicants as supporting this limitation do not actually teach or implicitly suggest this phrase.

There is no support for the p:q ratio found in claim 22. It appears that applicants may have intended for this limitation to reflect the 20 to 50 silanol group limitation found in, for instance, claim 10. However a 1:5 ratio is not consistent with this.

There is no support for the negative proviso “without fillers” in claim 22. The express exclusion of certain elements implies the permissible inclusion of all other elements not so expressly excluded which clearly demonstrates that the introduction of negative limitations not explicitly supported by the specification as originally filed do in fact introduce new concepts and are therefore new matter. *Ex parte Grasselli* 231 USPQ 394.

2. Claim 22 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is confusing and seemingly contradictory to indicate that a silane having an m value of 1, or an n value of 2, can form the siloxane polymer shown, since the structure does not allow for such units.

Art Unit: 1712

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 8, 11, 12, 14 and 16 to 18 and 23 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Schank.

The teachings of Schank, and how they relate to the instant claims, have been previously discussed in prior office actions. Applicants have inserted the preamble "a photo and thermally labile siloxane polymer... by the release of unsaturated hydrocarbons and protonated by products" to help distinguish the claims from the teachings of Schank. The siloxane polymer itself is obtained by the hydrolysis and condensation of a silane having an electronegative substituent in the beta position, as shown.

Schank prepare a siloxane polymer by the hydrolysis and condensation of a silane having an electronegative substituent in the beta position, as well. Products of identical chemical composition can not have mutually exclusive properties. A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. Based on this, it would appear that the preamble limitations noted supra are inherently met by the siloxane polymer of Schank, since the products are the same. Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical

Art Unit: 1712

processes, a prima facie case of either anticipation or obviousness has been established. In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not.

Applicants' response provides reasons which, they claim, indicate that the claims are not anticipated by Schank. These are not persuasive. The fact that Schank does not teach or suggest the thermal lability or the release of unsaturated hydrocarbons and protonated by products does not lend novelty to a siloxane that is the same as that in the prior art because, as noted supra, such properties are inherently associated with a product. While the reference does not show a specific recognition of the property/application argued, its discovery by applicants is tantamount only to finding a property in the old composition.

Applicants are of the position that the cyanoethyl substituted siloxane of Schank will produce hydrogen cyanide upon heating as a byproduct. This, however, has not been shown and furthermore, the electronegative substituent on R is inclusive of a cyano group.

Finally, with regards to the fact that Schank refers to a level of stability at low or elevated temperatures, the phrase "thermally labile" does not provide any temperature as a standard. The instant specification lends no clarity to this term, as it does not indicate a temperature at which these polymers are considered to be thermally labile (at least, the Examiner was unable to find such a teaching). The Examiner notes that the siloxanes of Schank, regardless of their stability at what is referred to as a low or elevated temperatures, will inherently degrade when heated to a sufficient temperature.

Thus, while Schank does not expressly set forth each and every element of the claim, such elements would appear to be inherently present in the siloxane polymers therein, in view of the fact that their chemical structures are the same, and they are produced by the same method. There is nothing to indicate that the siloxanes of Schank cannot be considered thermally and photo labile.

Art Unit: 1712

With regards to claim 8, the Examiner notes that this is a product by process claim. This difference in process does not reflect any difference in the product, since both silanes will make a comparable siloxane in which residual chlorine or alkoxy groups will form silanol groups.

6. Claims 2, 5, 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schank.

The Examiner relies on that noted supra, and that discussed in previous office actions, for this rejection. Applicants' preliminary remarks fail to establish the unobviousness of these claims. Applicants note that Schank does not teach or suggest that the compounds produce photo and thermally labile siloxane polymers or that these polymers would undergo the transformation required by the present claims. Again the Examiner notes that the siloxane polymers rendered obvious by Schank, i.e. those having an electronegative group as claimed, will inherently have the same properties as the siloxane polymer claimed. Applicants state that the siloxane of Schank are more thermally stable than the presently claimed siloxanes, but 1) there is nothing to support this statement, as there is no indication at what temperature thermal lability occurs or at what temperatures the siloxane polymer in Schank remain stable and 2) the siloxane polymer claimed does not structurally reflect any difference.

With regards to claim 15, note that supra regarding claim 8, as it presently applies.

7. Claims 1, 9, 11 to 13 and 15 to 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alekna.

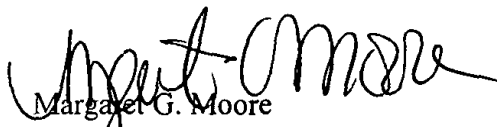
As discussed above, applicants have amended the claims to include the preamble regarding thermal lability. The Examiner maintains that since the beta chloroethyl siloxanes embraced by the claims are the same as those suggested by Alekna, these siloxanes will inherently possess the same properties. While Alekna discloses that the resin can be refluxed between 190 °C and 230 °C, this does not mean that the polymers are not thermally labile at higher temperatures.

Art Unit: 1712

8. In summary, for each of the above rejections, Applicants state that the ability of their polymers to be thermally labile at "moderate temperatures" is the crux of their invention. Without further specificity, however, the phrase "moderate temperatures" is open to interpretation and fails to adequately lend the claimed siloxanes sufficient definition to distinguish and/or render the claims unobvious over the prior art.

9. Any inquiry concerning this communication should be directed to Margaret G. Moore at telephone number (703) 308-4334.

Any **official** documents (after final rejection) can be faxed to (703) **872-9310**. All other **official** faxes should be sent to (703) **872-9311**. Please do not send any informal communication or proposed amendments to this number.


Margaret G. Moore
Primary Examiner
Art Unit 1712

mgm
Sept. 24, 2001